भारतीय मानक
Indian Standard

IS 1152 : 2022

आइसिंग चीनी — विशिष्टि

(तीसरा पुनरीक्षण)

Icing Sugar — Specification

(Third Revision)

ICS 67.180.10

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March 2022 **Price Group 3**

Sugar Industry Sectional Committee, FAD 02

FOREWORD

This Indian Standard (Third Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Sugar Industry Sectional Committee had been approved by the Food and Agriculture Division Council.

In India, icing sugar is manufactured by pulverizing superior vacuum pan sugar or refined sugar in a ball mill or other disintegrator with or without the addition of a small quantity of edible starch. It is mostly used for dusting confectionery and for dressing cakes, pastries and other bakery products.

This standard was published in 1958 and first revised in 1976 to incorporate a number of modifications including conformity of the colour of icing sugar to Indian Sugar Standard grade E 30 or the highest grade of colour and smallest grade of size of vacuum pan sugar as well as updating the methods of test referred to in this standard. The second revision was being undertaken to align with the revised Codex Standard for Sugars, CODEX STAN 212-1999 and to align the methods of test with the International Commission for Uniform Methods of Sugar Analysis (ICUMSA).

In this revision of standard, the limit of colour in ICUMSA unit reduced and similarly the limit of sulphur dioxide also reduced. Amendment incorporated in this revision.

In the formulation of this standard, due consideration has been given to the provisions of the *Food Safety and Standards Act*, 2006 and the Rules framed thereunder and the Legal Metrology (Packaged Commodities) Rules, 2011. However, this standard is subject to the restrictions imposed under these, wherever applicable.

Committee composition is provided at Annex B for members organization which are responsible for the formulation of this standard.

For the purpose of deciding whether a requirement of this standard is complied with the final value, observed or calculated, expressing the result of a test or analysis shall be rounded off in accordance with IS 2 : 1960 ‘Rules for rounding off numerical values (*revised*)’. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

ICING SUGAR — SPECIFICATION

(Third Revision)

1 SCOPE

This standard prescribes the requirements and the methods of test for icing sugar.

2 REFERENCES

The following standards contain provisions which through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid, all standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below:

IS No.	*Title*
1151 : 2021	Refined sugar — Specification (*third revision*)
4905 : 2015	Random sampling and randomization procedures (*first revision*)
5982 : 2003	Plantation white sugar — Specification (*second revision*)
14350 : 1996	Code for hygiene conditions in sugar factories
15279 : 2003	Sugar and sugar products — Methods of test

3 REQUIREMENTS

3.1 Description

Icing sugar shall be finely pulverized white sugar with or without addition of anticaking agent not exceeding 4 percent by mass. Anticaking agent, if added, shall be uniformly extended in the sugar. The material shall be in the form of white powder free from dust, or impurities, or any other extraneous matter.

3.1.1 Icing sugar shall be manufactured from refined sugar conforming to IS 1151.

3.2 Particle Size

Not less than 98 percent of the material shall pass through 150-micron IS Sieve and not less than 75 percent shall pass through 75 micron IS Sieve when sieved in a mechanical shaker for 10 min.

3.3 The product shall also comply with the requirements given in Table 1.

3.4 Icing sugar shall be manufactured, packed, stored and distributed under hygienic conditions (*See* IS 14350).

4 PACKING

Icing sugar shall be packed in hermetically sealed sound tin containers or in food grade plastics conforming

Table 1 Requirements for Icing Sugar

(*Clause* 3.3)

Sl No.	Characteristics	Requirement	Method of Test, ref to Cl of IS 15279
(1)	(2)	(3)	(4)
i)	Loss on drying, percent by mass, *Max*	0.1	4
ii)	Reducing sugar, percent by mass, *Max*	0.04	7
iii)	Colour in ICUMSA units, *Max*	45	8
iv)	Conductivity ash, percent by mass, *Max*	0.04	9
v)	Starch (moisture free), percent by mass, *Max*	4	11
vi)	Total of sucrose and starch (moisture free), percent by mass, Min.	99.5	12
vii)	Sulphur dioxide, mg/kg, *max*	10	13
viii)	Lead, mg/kg, *Max*	0.1	15

to relevant Indian Standard or in any other suitable nontoxic material.

5 MARKING

5.1 Each bag/pack shall bear legibly and indelibly the following particulars:

a) Name of the product;
b) Name and address of manufacturer;
c) Net quantity of sugar in the bag;
d) Month and year of manufacture;
e) Sucrose content, percent by mass;
f) Edible starch (if present, percent by mass);
g) Batch or code number;
h) The words 'Best before . . . .' (month and year to be indicated); and
j) Any other information required under the *Legal Metrology* (*Packaged Commodities*) *Rules*, 2011 and the *Food Safety and Standards* (*Packaging and Labelling*) *Regulations*, 2011.

5.2 BIS Certification Marketing

The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act*, 2016 and the Rules and Regulations framed thereunder, and the products may be marked with the Standard Mark.

6 SAMPLING

Representative samples of icing sugar shall be drawn and the criteria for conformity to this standard shall be established, according to the method prescribed in Annex A.

ANNEX A

(*Clause* 6)

SAMPLING OF ICING SUGAR

A-1 GENERAL REQUIREMENTS OF SAMPLING

A-1.0 In drawing, preparing, storing and handling samples, the precautions and directions given in **A-1.1** to **A-1.7** shall be observed.

A-1.1 Samples shall be taken in such a manner so as to avoid extraneous contamination.

A-1.2 The sampling instrument shall be clean and dry when used.

A-1.3 Precautions shall be taken to protect the samples, the material being sampled, the sampling instrument and the containers for samples from adventitious contamination.

A-1.4 The samples shall be placed in clean and dry glass containers. The sample containers shall be of such a size that they are almost completely filled by the sample.

A-1.5 Each container shall be sealed air-tight after filling and marked with full details of sampling, such as date of sampling, date of manufacture, batch number, name of manufacturer, name of the person carrying out the sampling, and other particulars as considered necessary.

A-1.6 Samples shall be stored in such a manner that the conditions of storage do not unduly affect the quality of the materials.

A-1.7 Sampling shall be done by a person agreed to between the purchaser and the vendor and in the presence of the purchaser and the vendor or their representatives.

A-2 SCALE OF SAMPLING

A-2.1 Lot

All the containers in a single consignment of the material drawn from a single batch of manufacture shall constitute a lot. If the consignment is declared to consist of different batches of manufacture, the batches shall be marked separately and the groups of containers in each batch shall constitute separate lots.

A-2.2 For ascertaining the conformity of the material to the requirements of the specification, samples shall be tested from each lot separately.

A-2.3 The number of containers to be selected from a lot shall depend on the size and shall be in accordance with Table 2.

A-2.3.1 These containers shall be selected at random from the lot and in order to ensure the randomness of selection; procedure given in IS 4905 maybe followed.

A-3 TEST SAMPLES AND REFEREE SAMPLES

A-3.1 Mix thoroughly the contents of each container selected according to **A-2.3**, to ensure the homogeneity of the contents. Draw from each container so selected, portions of material with an appropriate sampling instrument. Mix thoroughly the portions of materials so drawn from all the containers from a lot so as to form a composite sample of not less than 1 kg. In case a lot consists of containers of 0.5 kg capacity or less, thoroughly mixed entire quantity of material from all the containers selected so as to form the composite sample, the minimum quantity in the composite sample being 1 kg. The composite sample shall be divided into three equal pans, one for the purchaser and another for the supplier and the third for use as a referee sample.

Table 2 Number of Containers to be Selected for Sampling from Various Sizes of Lots

(*Clause* A-2.3)

Sl No.	Lot Size	Sample Size
(1)	(2)	(3)
i)	Up to 25	3
ii)	26-50	4
iii)	51-100	5
iv)	101-300	6
v)	301-500	7
vi)	501-800	8
vii)	801-1300	9
viii)	1301 and above	10

A-3.2 The parts of composite sample shall constitute test samples and shall be transferred immediately thoroughly cleaned and dried bottles which shall be sealed and air-tight preferably with glass stoppers. These shall be labelled with the particulars given in **A-1.5**. One test sample shall be sent to the purchaser and another to the supplier.

A-3.3 The third test sample, bearing the seals of the purchaser and supplier shall constitute the referee sample to be used in case of dispute between the two. It shall be kept at a place agreed to between the purchaser and the supplier.

A-4 NUMBER OF TESTS

Tests for all the characteristics given in this specification shall be conducted on the composite sample.

A-5 CRITERIA FOR CONFORMITY

The lot shall be declared to have satisfied the requirements of this specification, if all the test results in all the composite sample meet the corresponding requirements.

ANNEX B

(*Foreword*)

COMMITTEE COMPOSITION

Sugar Industry Sectional Committee, FAD 02

Organization	*Representative(s)*
National Sugar Institute, Kanpur	Shri Narendra Mohan (***Chairman***) Shri Ashutosh Bajpai (*Alternate*)
Army Service Core (ASC), New Delhi	Lt Col B. B. Sahu
CONCERT, Chennai	Shri R. Santhanam Shri M. Somasundaram (*Alternate*)
Consumer Guidance Society of India, Mumbai	Shri Sitaram Dixit Dr M. S. Kamat (*Alternate*)
Food Corporation of India, New Delhi	Shri Deepak Kumar Panwar Shri Rakesh Kumar Ranjan (*Alternate*)
Food Safety Standards Authority of India, New Delhi	Ms Apoorva Srivastava (*Technical Officer*)
Global Cane Sugar Ltd, New Delhi	Dr G. S. C. Rao Mr Anil Srivastava (*Alternate*)
Indian Institute of Sugarcane Research, Lucknow	Dr A. D. Pathak Dr A. K. Sharma (*Alternate*)
Indian Institute of Toxicology Research, Lucknow	Dr Yogeshwer Shukla
Indian Sugar Mills Association, New Delhi	Shri G. K. Thakur Shri Deep Malik (*Alternate*)
Indian Sugar Exim Corporation, New Delhi	Mr Rajiv Aggarwal Mr Rajeev Kurup (*Alternate*)
MAARC Labs, Pune	Dr Vasudha Keskar
MANAS Industry, Maharashtra	Shri Jeevan Vasant Jadhav
Ministry of Consumer Affairs, Food and Public Distribution, New Delhi	Shri Suresh Chandra
National Co-operative Development Corporation, New Delhi	Shri K. P. Vaish Shri N. K. Sharda (*Alternate*)
National Federation of Co-operative Development Corporation, New Delhi	Mr Manohar Gopal Joshi
The Sugar Technologists Association of India, New Delhi	Shri Sanjay Awasthi Shri Anurag Goyal (*Alternate*)
Triveni Engineering and Industries Ltd, Muzaffarnagar, UP	Rajesh Singh P. K. Khadelwal (*Alternate*)
Tamil Nadu Sugar Corporation Ltd (TASCO), Chennai	E. Muthuvelappan
VSI Pune	Dr Rajeev Dani

Organization	*Representative(s)*
Walchandnagar Industries	Shri D. R. Sardeshmukh Shri P. V. Kawade (*Alternate*)
In personal Capacity	S. K. Gupta
BIS Directorate General	Shrimati Suneeti Toteja, Scientist 'E' and Head (FAD) [Representing Director General (*Ex-officio*)]

Member Secretary

Shri Rajpal
Scientist 'D' (FAD), BIS

Bureau of Indian Standards

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Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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